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Dr. Batra is a theoretical physicist in the Materials Sciences Department at the laboratory in San Jose. His current interests include interband optical absorption, phonon-assisted transitions in semiconductors, photoconductivity and stimulated scattering of laser light in homogeneous media. He has been with IBM since 1969. His degrees are all in Physics—the B.Sc. and M.Sc. in 1962 and 1964, respectively, from Delhi University, India, and the Ph.D. in 1968 from Simon Fraser University, Canada. Dr. Batra is a member of the American Physical Society.

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Mr. Fulkerson is a member of the Computer Science Department at the Research Center in Yorktown, where he is currently involved in the programming and analysis of a computer netting system. He received his B.A. from Reed College and did graduate work in mathematics at New York University. Before coming to IBM in 1964 he had been an engineer for the Bendix Corporation and a senior project engineer for the Western Union Telegraph Company from 1957 to 1963. While at Western Union, he was in charge of an analysis group studying communications systems by operations research techniques. Mr. Fulkerson is a member of the Association for Symbolic Logic.

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Mr. Fromm is with the Large Scale Scientific Computation Group at the laboratory in San Jose. He joined IBM in 1966. His education includes a B.S. from the University of Colorado in 1953 and an M.S. from the University of California at Los Angeles in 1955, both in Physics. His graduate studies were supported by a Hughes Fellowship and his early work dealt with electromagnetic waves. From 1956 to 1966 he was a member of the staff at Los Alamos Scientific Laboratory where his pioneering research on numerical hydrodynamics and computer graphics began. Mr. Fromm is a member of the American Physical Society and the Environmental Sciences Institute.

William D. Gill

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Dr. Gill is currently engaged in the study of the photo-electronic and transport properties of insulating solids at the research laboratory in San Jose, where he joined the company in 1962. He received a B.A.Sc. and an M.A.Sc. in 1960 and 1962, respectively, from the University of British Columbia, both in Engineering Physics. In 1967 he took an educational leave of absence to engage in research on photovoltaic effects in heterojunctions at Stanford University, where he received his Ph.D. in Materials Science in 1969. Dr. Gill is a member of the American Physical Society and Sigma Xi.

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Mr. Guido is the manager of a laboratory automation group at the Research Center, where he has worked since 1966. He received a B.S. in Electrical Engineering from New York University in 1960. He was a Technical Aide at Bell Telephone Laboratories from 1954 to 1955; a Research Associate at New York University from 1955 to 1960; a Senior Systems Engineer at RCA from 1960 to 1962; and Assistant Manager of Industrial Products at PRD Electronics from 1962 to 1966. While at PRD he assumed programming responsibilities for the Versatile Avionics Shop Tester, the first fully automated tester for naval avionics equipment. Mr. Guido is a member of Tau Beta Pi and Eta Kappa Nu.

Kay Keiji Kanazawa

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Dr. Kanazawa has worked in the areas of large polaron transport and electrical phase transitions; he is currently engaged in the study of the nature of electrical transport in insulating media at the research laboratory in San Jose. He has been with IBM Research since 1968. He received a B.S. in Applied Physics in 1957 from the University of California at Los Angeles, and a Ph.D. in Physics in 1964 from the University of Illinois. Prior to joining IBM Dr. Kanazawa spent four years at the University of California at Riverside.

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Dr. Lederle is a project leader in an advanced media technology group at the laboratory in Boulder. His education includes a B.S. in Chemistry from the University of Detroit in 1959, an M.S. and an M.S.E. in Mathematics and Chemical Engineering in 1962 and 1963, respectively,

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Dr. Lester is a member of the Large Scale Scientific Computation Group at the research laboratory in San Jose, where he joined IBM in 1968. His technical interests include the accurate study of molecular dynamics and the calculation of cross sections for nonreactive low-energy heavy particle scattering processes. He received the B.S. in 1958 and the M.S. in 1959, both in Chemistry from the University of Chicago. In 1964 he received the Ph.D. in Chemistry from the Catholic University of America. From 1961 until 1966 he was a physical chemist at the National Bureau of Standards and from 1965 until 1968 he was affiliated with the University of Wisconsin, holding at various times positions as postdoctoral research associate in the Theoretical Chemistry Institute, assistant director of the Institute and lecturer in the department of Chemistry. Dr. Lester is a member of the American Chemical Society, the American Physical Society, Sigma Xi and the New York Academy of Sciences.

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Dr. Schechtman is a physicist in the photophysics research group at the laboratory in San Jose. He has been with IBM since 1968, and has been involved in theoretical and experimental studies of electronic transport in insulating solids and with the laboratory automation of high-speed-transient physics experiments. His degrees are all in Electrical Engineering—the B.E.E. from Cooper Union in 1963, the M.S. and the Ph.D. in 1964 and 1969, respectively, from Stanford University. He has worked on VHF, UHF and microwave circuit design for Bell Laboratories and Hughes Aircraft Company, and has studied tunneling in solid insulating films at the General Electric Research Laboratory. Dr. Schechtman is a member of the American Physical Society, Tau Beta Pi, Eta Kappa Nu and Sigma XI.

Hajimi Seki

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Dr. Smart is manager of the Environmental Sciences group in the Physical Sciences Department of the Research Center, where his main interests are currently in hydrology and geomorphology. He has been with IBM Research since 1960, initially as manager of magnetism research. His education includes a B.A. from Westminster College, Missouri in 1939; an M.S. from Louisiana State University in 1941; and a Ph.D. in physics from the University of Minnesota in 1948. He worked as an engineering cadet instructor for the U. S. Army Air Force from 1941–43 and as a physicist in the Magnetic Minesweeping section of the U. S. Navy Bureau of Ships from 1943–46. He was a staff member of the U. S. Naval Ordnance Laboratory from 1948–55 and held a variety of posts with the Office of Naval Research, 1955–60. Dr. Smart is a member of the American Association of Physics Teachers, the American Geophysical Union, the American Water Resources Association, the American Association for the Advancement of Science, and is a Fellow of the American Physical Society and the Physical Society of London. He is the author of the book, *Effective Field Theories of Magnetism*.

Paul E. Stuckert

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Mr. Stuckert is a staff member in the Experimental Systems group in the Computer Sciences Department at the Research Center. He has been with IBM since 1956. His degrees are in Electrical Engineering—the B.S. in 1947 and the M.S. in 1948, both from Purdue University. From 1948 to 1950 he worked at the Indiana Steel and Wire Company, and from 1950 to 1956 at the Westinghouse Electronics Division. Mr. Stuckert is a member of the American Association for the Advancement of Science and the Instrument Society of America.

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